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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,515	05/02/2005	Gerald Eckert	DE02 0245 US	4545

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EXAMINER

ARANI, TAGHI T

ART UNIT	PAPER NUMBER
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2139

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,515	Applicant(s) ECKERT ET AL.	
	Examiner Taghi T. Arani	Art Unit 2139	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-10 have been examined and are pending.

Response to Argument

2. Applicant's arguments filed 2/13/2007 relating to the rejection of claims 1-10 have been fully considered but they are not persuasive.

As per applicant's argument relating to the rejection of claims 1-4 and 6-8 under 35 U.S.C. sec. 101, applicant argues (REMARKS, page 8, last paragraph continuing onto page 9) that "none of the claims 1-4 and 6-8 cover law of nature, natural phenomenon, or abstract idea" and that claims 1-4 and 6-8 are drawn to method and devices, respectively that are useful in finding matching pairs". Applicant further argues that since "these methods and devices do not cover any law of nature, natural phenomenon, or abstracts idea. Accordingly, the entire analysis as to whether the claims *"produce a tangible result or practical application"* is not even pertinent under the OG Notice".

The examiner turns attention to the same USPTO "interim guidelines" (OG Notice) referred by the applicant in section IV (A) which clearly states 35 U.S.C. 101 requires that the subject matter sought to be patented be a "useful" invention and that "a complete definition of the scope of 35 U.S.C. sec. 101, reflecting Congressional intent, is that any new and useful process, machine, manufacture or composition of matter under the sun that is made by man is the proper matter of a patent". That is to say, in determining whether a claim encompasses statutory subject matter, one should not focus on which of the four subject matter a claim is directed to (provided that the subject matter falls into at least one category of statutory subject matter) but

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rather on the essential characteristics of the subject matter, in particular, its practical utility. Furthermore, assuming the invention as set forth in the written description is statutory, but the claims define subject matter that is not, the deficiency can be corrected by an appropriate amendment of the claims. Examiner has been clear and indicated that claims 5 and 9 cure the deficiency because they provide the practical application in fingerprint matching.

Ascertaining the scope of claims 1-4 and 6-8, the examiner has concluded that the claims are directed to practical application of a sec. 101 judicial exception. In particular, the subject matter recited by claims 1-4 and 6-8 are directed to mathematical algorithm and/or computation without a practical application that produces a useful, concrete and tangible result. The interim guidelines clearly state that “ even when a claim applies a mathematical formula, for example as part of a seemingly practical process, the examiner must ensure that it does not in reality “seek[] patent protection for that formula in the abstract” (preemption of idea).

Therefore, claims 1-4, and 6-8 are not for practical application that produces a useful result and are rejected under this section, hence rejected under 35 U.S.C. sec 101 of judicial exception.

As per applicant’s argument relating to the rejection of claims 1,5,6,9 and 10 under 35 U.S.C. 102 (b), the applicant merely has argued that the cited reference of Ferris et al. Fails to teach “finding maximum number of matching pair” as claimed.

T The examiner disagrees. Ferris et al. teaches (Abstract) that “maximally long chains of steps are formed which are called “hyperladders”. Ferris et al. further teaches that (Abstract) “within the largest hyperladders formed from a given search-file pair prints the number of links

is a measure of the likelihood that the search and file fingerprints are the same". This clearly reads on the claimed "finding maximum matching pair".

Therefor, the rejections of claims 1, 5,6,9, and 10 are respectfully maintained.

As per Applicant's statement that claims 2-4 and 7-8 are not rejected based on art. The Examiner agrees with the statement. However, claims 2-4 and 7-8 are rejected under 35 U.S.C. 101 as being dependent on base rejected claims and not curing the deficiencies of the base claims.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-4, 6-8 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. The claimed invention is directed to "detecting point correspondences" and "finding possible matching pairs" which in and of itself does not constitute a specific and substantial utility.

Claims 1-4, and 6-8 are rejected under 35 U.S.C.101 because the claims are directed to a non-statutory subject matter.

The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. 101. The practical application test requires that a "useful, concrete, and tangible result" be accomplished. An "abstract idea" when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful

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result. The test for practical application is thus to determine whether the claimed invention produces a useful, concrete and tangible results.

Claims 1-4, and 6-8 are directed to “detecting point correspondences” and “finding possible matching pairs”. There is no showing in the claims that the claims are for “practical application” and what, if any, the final result is used for. Merely “finding a maximum number of matching pairs” does not meet the statutory requirement of 35 U.S.C. 101. For an invention to be useful it must satisfy the utility requirement of section 101. The utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. MPEP2107 and Fisher, 421 F.3rd, 76 USPQ2d at 1230.

Therefore, 1-4, and 6-8 are not for practical application that produces a useful result and are rejected under this section.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, 6, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 5,631,972 (IDS filed 05/02/2005) to Ferris et al. (hereinafter “Ferris”).

As per claims 1, 5, 6, 9 and 10, Ferris teaches a method of detecting point correspondences between a first set of points and a second set of points (Figs 7 and 12), comprising the following steps:

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finding of possible matching pairs comprising a point from the first set of points and a point from the second set of points (col. 7, lines 54 through col. 8, line 7), and finding a maximum number of matching pairs (Abstract, col. 8, lines 50-60, col. 10, lines 8-16, lines 40-62, where maximally large hyperladder are formed).

Ferris teaches wherein the point from the first set of points and the point from the second set of points are each points of note on fingerprint lines (col. 5, lines 61 through col. 6, line 16), the first set of points corresponding to a scanned fingerprint (col. 6, lines 24, i.e. search prints image), the second set of points corresponding to a reference fingerprint (col. 6, line 26, i.e. file prints), the points of note on the fingerprint lines in the scanned fingerprint allowing to be matched with the points of note in the reference fingerprint, and the method being a method of fingerprint verification in which the scanned fingerprint is compared with the reference fingerprint (Figs. 1 and 1A and associated texts, see also col. 6, lines 23-27) .

Action is Final

5. THIS ACTION IS FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taghi T. Arani whose telephone number is (571) 272-3787. The examiner can normally be reached on 8:00-5:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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PRIMARY EXAMINER
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